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Min Kyu Lim

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EXAMINER

KLING, CHARLES

ART UNIT

PAPER NUMBER

4171

MAIL DATE

DELIVERY MODE

12/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,130	Applicant(s) LIM ET AL.	
	Examiner CHARLES W. KLING	Art Unit 4171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group III, claims **19-30**, in the reply filed on 11-19-09 is acknowledged.
2. Claims 1-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11-19-09.

Drawings

3. Figures **1-2** should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
4. The disclosure is objected to because of the following informalities: Several typographical errors exist in the figures. Those errors noticed by the examiner are listed below; the applicant is encouraged to review the figures for additional errors. Appropriate correction is required.

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- a. element 16 of figure 2; words misspelled
- b. element S12 of figure 13; word misspelled
- c. element S14 of figure 13; word misspelled

Specification

- 5. The disclosure is objected to because of the following informalities: A space needs to be added between words “pin 80”, in line 4 of page 16. Appropriate correction is required.
- 6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

- 7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 8. Claims **23, 28** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- 9. Regarding claims 23, 28, the meaning of term “such as a heat” in line 2 of both claims is unclear and not descriptive.

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10. Claims **23, 25, 28, 30** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Regarding claims 23, 25, 28, 30, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). For examination purposes, the claims have been construed to **not** include any limitations immediately following the phrase "such as".

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The elements of the claims, when recited in this action, are anticipated and/or disclosed by the relevant prior art as shown in parenthesis and bold type.

14. Claims **19-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over KIM ET AL. (PG-Pub 2004/0083769) in view of CARTIER (US-4,449,383).

15. With regard to claim **19**, recited below, KIM ET AL. teaches:

A method for controlling a washing apparatus (**...a washing machine...line 2 of abstract**) comprising the step of cutting off a current to electric driving units (**...a**

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motor...line 5 of paragraph [0057]) under operation if a door lock switch which locks or unlocks a door (**element 400 of figure 12**) senses forced opening of the door.

16. KIM ET AL. does not appear to explicitly/expressly disclose the step of cutting off the current to electric drive units when the door is opened.

17. However, CARTIER discloses a lid switch for a washing machine that cuts off the current to electric drive units (**...power to the motor is interrupted...line 66 of column 2**) when the door is opened (**...the opening of the lid...results in de-energization of the washer...lines 67-68 of column 2, line 1 of column 3**).

18. At the time of the invention, it would have been *prima facie* obvious to one having ordinary skill in the art to modify the washing apparatus of KIM ET AL. to include the current cut-off of CARTIER, since de-energizing the motor in the event of the door opening, stops the basket from spinning, which improves safety conditions for the operator, as suggested by CARTIER (**lines 63-68 of column 2, lines 1-2 of column 3**).

19. With regard to claim 20, recited below, KIM ET AL. teaches:

A method for controlling a washing apparatus (**...a washing machine...line 2 of abstract**) having a body forming an exterior thereof (**element 100 of figure 5**), electric driving units provided to the body (**...a motor...line 5 of paragraph [0057]**), an opening in a front surface of the body (**element 120 of figure 5**), a door for opening/closing the opening (**element 200 of figure 6**), a door lock switch for locking/unlocking the door (**element 400 of figure 12**), and a switch in the door lock switch for being closed when

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the door is locked at the door lock switch to supply a current to the electric driving units, comprising the step of:

the door lock switch sensing forced opening of the door; and

opening the switch to cut off the current to the electric driving units under operation when the forced opening of the door is sensed.

20. KIM ET AL. does not appear to explicitly/expressly disclose a switch that is closed when the door is locked which senses the opening of the door and cuts off current in the event of the door opening.

21. However, CARTIER discloses a switch for an automatic washer (**element 30 of figure 3**) that is closed when the door is closed and which senses the opening of the door and cuts off current in the event of the door opening (**lines 63-68 of column 2, lines 1-2 of column 3**).

22. At the time of the invention, it would have been *prima facie* obvious to one having ordinary skill in the art to modify the washing apparatus of KIM ET AL. to include the door opening sensor and switch of CARTIER, since de-energizing the motor in the event of the door opening, stops the basket from spinning, which improves safety conditions for the operator, as suggested by CARTIER (**lines 63-68 of column 2, lines 1-2 of column 3**).

23. Claims **21-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over KIM ET AL. and CARTIER as applied to claim 20 above, and further in view of SPIESSL (US-6,634,684).

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24. With regard to claim **21**, recited below, KIM ET AL. and CARTIER teach:

A method for controlling a washing apparatus (**...a washing machine...KIM ET AL., line 2 of abstract**) having a body forming an exterior thereof (**KIM ET AL., element 100 of figure 5**), electric driving units provided to the body (**...a motor... KIM ET AL., line 5 of paragraph [0057]**), a door (**KIM ET AL., element 200 of figure 6**) for opening/closing an opening in the body (**KIM ET AL., element 120 of figure 5**), a hook on the door (**KIM ET AL., element 300 of figure 6**), a switch casing on the body in correspondence to the hook on the door (**KIM ET AL., element 410 of figure 12**), a slider for making the hook on the door to be locked/unlocked at the switch casing, a locking pin for locking/unlocking the slider, a bimetal for moving the locking pin to a locking or unlocking position of the slider, a switch designed to be closed when the locking pin moves to the locking position of the slider, and a safety lever for opening the switch, comprising:

a first step of locking the door to close the switch;

a second step of applying a current to the electric driving units as the switch is closed (**...the switch provides energization to the motor when the plunger is depressed...CARTIER, lines 63-65 of column 2**);

a third step of opening the door forcibly, to open the switch; and

a fourth step of cutting off the current to the electric driving units as the switch is opened (**...the opening of the lid...results in de-energization of the washer... CARTIER, lines 67-68 of column 2, line 1 of column 3**).

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25. KIM ET AL. and CARTIER do not appear to explicitly/expressly disclose a switch that is closed by a slider which engages the hook, a locking pin which locks the slider, and a bimetal which moves the locking pin, or a safety lever which opens the switch.

26. However, SPIESSL discloses a latching mechanism for the door of a washing machine which includes a switch **(element 50 of figure 2)**, that is closed by a slider **(element 20 of figures 1-3)** which engages the hook **(element 10 of figures 1-3)**, a locking pin **(element 32 of figures 1-3)** which locks the slider, and a bimetal **(element 34 of figures 1-3)** which moves the locking pin, or a safety lever **(element 48 of figure 3)** which opens the switch **(opening and closing of switch discussed in lines 57-67 of column 1, lines 1-31 of column 2)**.

27. At the time of the invention, it would have been *prima facie* obvious to one having ordinary skill in the art to modify the washing apparatus of KIM ET AL. and CARTIER to include the latching mechanism of SPIESSL, since the use of this locking mechanism allows for brief, operator initiated, washing interruption without undue inconvenience, as taught by SPIESSL **(lines 61-63 of column 2)**.

28. With regard to claim 26: The elements of claim 26 are identical to the elements of claim 21 with the exception of one additional element which is recited below. KIM ET AL. teaches:

...a solenoid **(element 46 of figure 3)** for deforming the bimetal to make the locking pin to move to the locking or unlocking position of the slider...**(solenoid operation discussed in lines 2-14 of column 5)**

29. With regard to claim 22, recited below, SPIESSL teaches:

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The method as claimed in claim 21, wherein the first step includes the step of locking the door to make the locking pin to move to the locking position of the slider by thermal deformation of the bimetal, to close the switch **(thermal deformation of the bimetal discussed in lines 22-25 of column 4)**.

30. With regard to claim **23**, recited below, SPIESSL teaches:

The method as claimed in claim 22, wherein the thermal deformation of the bimetal is made by heat generated at a heat source **(...PCT resistor...line 30 of column 4)**, such as a heat.

31. With regard to claims **24, 29**, recited below, SPIESSL teaches:

The method as claimed in claim [21, 26 respectively], wherein the third step includes the step of opening the door forcibly, to make the locking pin to move to the unlocking position of the slider by the safety lever to open the switch **(safety lever operation discussed in lines 2-14 of column 5)**.

32. With regard to claims **25, 30**, recited below, CARTIER teaches:

The method as claimed in claim [21, 26 respectively], wherein the electric driving units are devices which use electricity as power sources **(...an electrically driven motor...line 65 of column 1)**, such as a motor for rotating a drum, or a water supply valve for supplying water to a tub.

33. With regard to claim **27**, recited below, SPIESSL teaches:

The method as claimed in claim 26, wherein the first step includes the step of locking the door to make the locking pin to move to the locking position of the slider by thermal deformation of the bimetal **(thermal deformation of the bimetal discussed in**

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lines 22-25 of column 4) and operation of the solenoid, to close the switch **(solenoid closing the switch discussed in lines 20-22 of column 5).**

34. With regard to claim **28**, recited below, SPIESSL teaches:

The method as claimed in claim 27, wherein the thermal deformation of the bimetal is made by heat generated at a heat source (**...PCT resistor...line 30 of column 4**), such as a heat, and the solenoid acts toward a direction of the thermal deformation of the bimetal as a current is applied thereto **(solenoid operation discussed in lines 2-14 of column 5).**

Conclusion

35. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. GIUSEPPE ET AL. (GB-2 128 283) is considered pertinent as it deals with a safety locking device for a washing machine.
- b. FUSHIYA (GB-2 232 755) is considered pertinent as it deals with a lid switch which de-energizes the dehydration motor of a washing machine.
- c. CHIOFFI ET AL. (EP-0 965 677) is considered pertinent as it deals with a door switch which utilizes both a bimetal and a solenoid.
- d. CHIOFFI ET AL. (US-6,082,787) is considered pertinent as it deals with a safety locking device for a washing machine.
- e. RANGE ET AL. (US-6,363,563) is considered pertinent as it deals with pausing washer operation briefly when the door is opened by the operator.

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- f. SPIESSL ET AL. (US PG-Pub 2004/0104580) is considered pertinent as it deals with various latching devices for household appliances.

36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES W. KLING whose telephone number is 571-270-5524. The examiner can normally be reached on Monday through Friday 8:00 - 4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Barbara Gilliam can be reached on 571-272-1330. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHARLES W. KLING/
Examiner, Art Unit 4171

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/Barbara L. Gilliam/

Supervisory Patent Examiner, Art Unit 4171